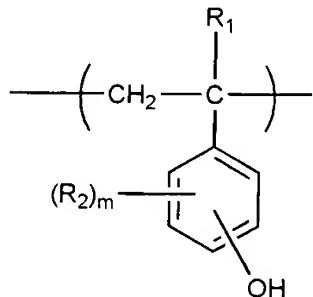


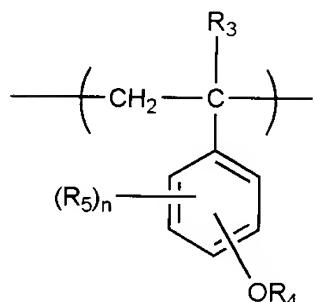
What Is Claimed:

1. An alkenylphenol copolymer characterized by that a copolymer consists of Component (A) containing a repeating unit represented by Formula (I)



Formula (I)

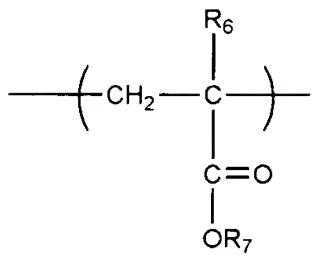
(wherein, R₁ is hydrogen or methyl, R₂ is alkyl having 1 to 5 carbons, m is 0, 1 or 2 and R₂ is the same or different when m is 2) and a repeating unit represented by Formula (II)



Formula (II)

(wherein, R₃ is hydrogen or methyl, R₄ is a group to be eliminated and/or decomposed with an acid, R₅ is alkyl having 1 to 5 carbons, n is 0, 1 or 2 and R₅ is the same or different when n is 2) and Component (B) containing a

repeating unit represented by Formula (III)



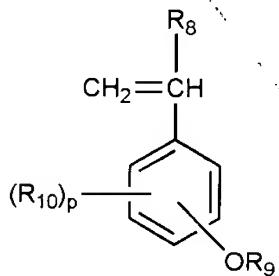
Formula (III)

(wherein, R_6 is hydrogen or methyl, and R_7 is a group having a t-butyl group and to be eliminated and/or decomposed with an acid), of which Components (A) and (B) are bound in block in the form of (A) - (B), has a ratio (M_w/M_n) of the weight-average molecular weight (M_w) to the number-average molecular weight (M_n) in a range of 1.00 and 1.50, and has no carboxylic acid residues.

2. An alkenylphenol copolymer according to Claim 1 in which the weight-average molecular weight is 1,000 to 100,000.

Sub A1

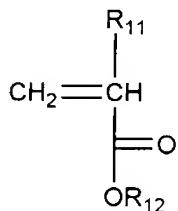
3. A process for the preparation of the alkenylphenol copolymer according to Claim 1 or 2 in which a compound represented by Formula (IV) whose hydroxyl group of the phenol residue is protected



Formula (IV)

Sub A1

wherein, R₈ is hydrogen or methyl, R₉ is a group to be eliminated and/or decomposed with an acid, R₁₀ is alkyl having 1 to 5 carbons, p is 0, 1 or 2 and R₁₀ is the same or different when p is 2) is polymerized, or a compound of Formula (IV) and a vinylaromatic compound are copolymerized, by anionic polymerization using an anionic polymerization initiator as a polymerization initiator, followed by copolymerization with a (meth)acrylic ester represented by Formula (V)



Formula (V)

(wherein, R₁₁ is hydrogen or methyl, and R₁₂ is a group having a t-butyl group and to be eliminated and/or decomposed with an acid); and the obtained block copolymer is treated with an acid reagent to eliminate and/or decompose only a specified amount of the group protecting the phenolic hydroxyl group.

4. A process for the preparation of the alkenylphenol copolymer according to Claim 3 in which the step of eliminating and/or decomposing only a specified amount of the group protecting the phenolic hydroxyl group with an acid reagent is carried out at below 60°C.

Sub A2